

Work Order ID 158178

Monday, March 13, 2017 10:45:31 AM

158178

Page 1

Item ID: D4037-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Aft Crossbeam
Start Date: 3/13/2017 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 3/27/2017 Req'd Qty: 2.00 ***2*** Customer:
Reference: SCHEDULE/S

Approvals: Process Plan: DAS 21 Date: MAR 13 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4037	E								
100		0.00							
100									
Waterjet	Memo	0.22				<u>2</u>	<u>DAS 46</u>	<u>17/03/19</u>	
FLOW CNC Waterjet	Cut blank as per file D4037-1_BLANK								
110		0.21							
110									
HAAS 1	Memo	0.61				<u>2</u>		<u>17-3-22</u>	
HAAS CNC vertical machine #1	MACHINE AS PER FOLI FA877 AND DWG								
	FOLIO REV: <u>AA</u>								
	DWG REV: <u>E</u>								
	DEBURR								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause				FAULT CATEGORY																					
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐		Power Loss/Surge ☐		Positioned Wrong ☐															
Design ☐		Operator ☐		Bending ☐		Set-up ☐		Folio/Program ☐		Outside Dimensions ☐															
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐		Grain ☐		Over/Under tolerance ☐															
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐		Weld ☐		Part Incorrect ☐															
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Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐		Out of Sequence ☐		Part Moved ☐															
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐		Off-set ☐		Drawing ☐															
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Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00							217-3-22
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				2	0		DAS 49 9-89 17/03/20
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.08				2			DAS 41 9-89 17-3-26

DQA: _____ Date: _____



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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition					
								Completed By	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>in B6657</i> Memo	0.00 0.09				2	0	17-03-28	<i>START: 2:10. O.V.T: 200° FINISH: 2:40.</i> 383
160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				2			DAS 38 9-89 MAR 29 2017
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: <i>St471</i> Memo	0.00 0.00				2			MAR 29 2017 DAS 36 9-89

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control									

17/3/30 *[Signature]*
MF
17-3-29

DQA: _____ Date: _____



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Picklist Print

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Parent Item: D4037-1

D4037-1

Parent Item Name: Aft Crossbeam

Start Date: 3/15/2017

Required Date: 3/27/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 09-12-14 JLM VERIFIED BY:EC IPP
REV:B AS PER REV B 10-04-19 JLM VERIFIED BY:EC IPP REV
C:AS PER ECN 10-563 10-09-28 JLM VERIFIED BY:DD
IPP REV:D AS PER ECN 11-554 11-05-24 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M6061T6B1.000X16.00
0

Purchased

No

100

f

19.1000

3.9

8.210526

M6061T6B1 000X16 000

6061-T6 Bar 1.00 x 16.00

DAS
46
9-89

17/03/20

Location

Loc Qty

Loc Code

MAT007

19.1

m136396

15.1

m136899

4

M137080

8

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

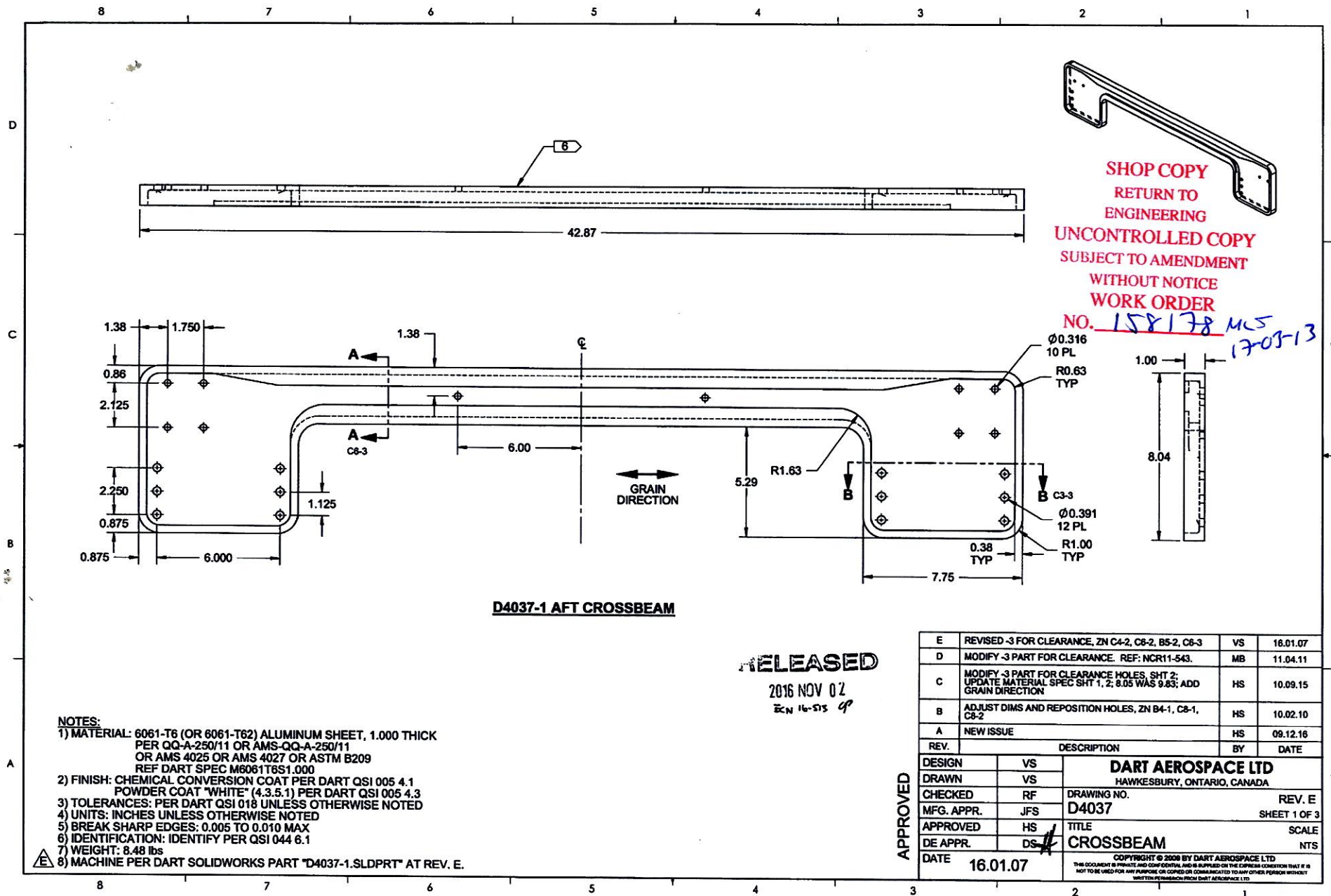
DART AEROSPACE LTD		Work Order:	158178
Description: Aft Crossbeam		Part Number:	D4037-1
Inspection Dwg: D4037	Rev: D E H 17.03.13	Page 1 of 1	

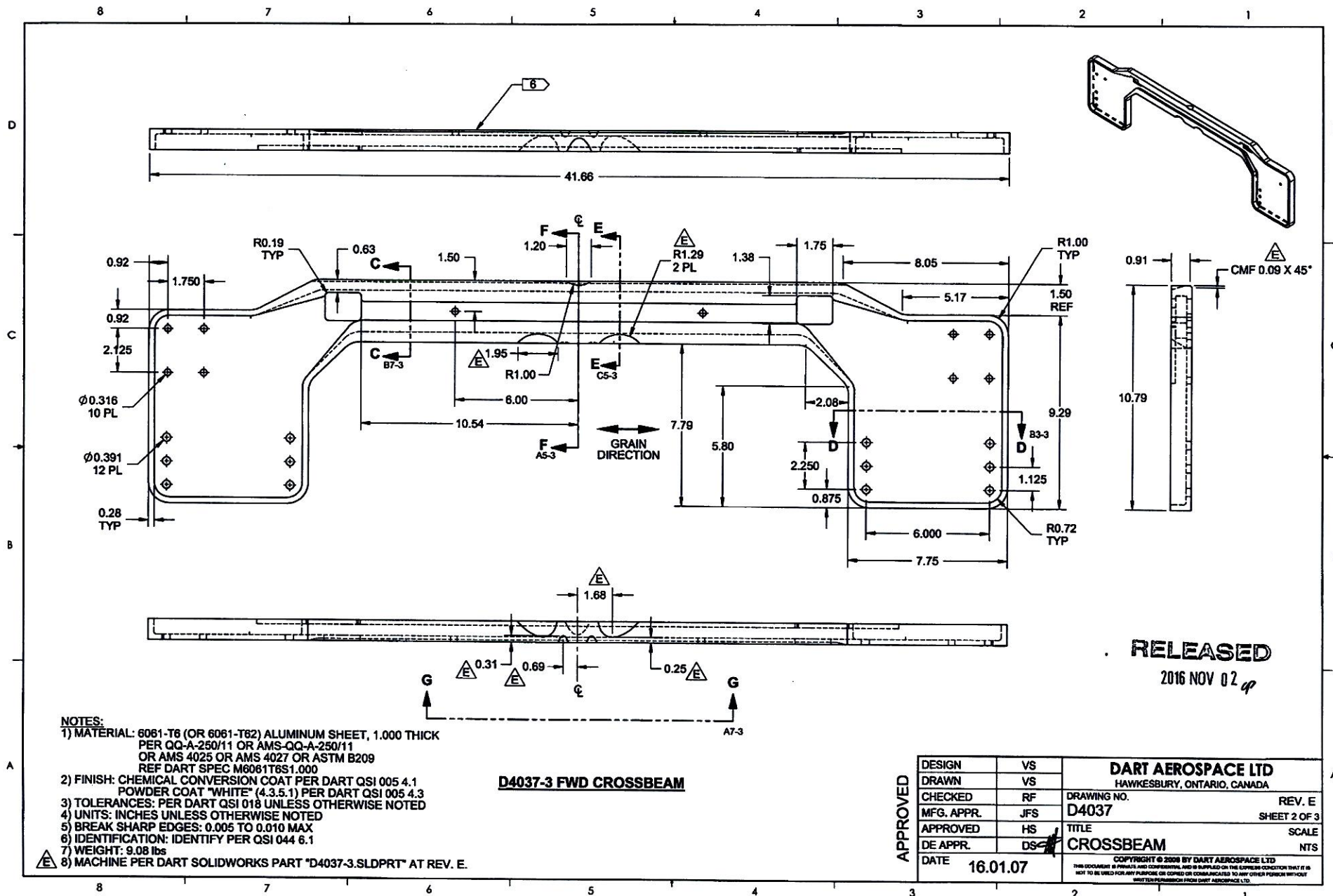
FIRST ARTICLE INSPECTION CHECKLIST

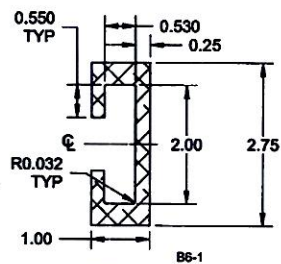
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.530	+/-0.010	-522	/		G-PIN	
0.25	+/-0.030	-253	/		VERMIC	2-10 CNC 118-120
2.00	+/-0.030	2005	/			
2.75	+/-0.030	2750	/			
1.00	+/-0.030	1.017	/			
R0.032	+/-0.010	R 032	/			
42.87	+/-0.030	42.87	/		M-TAPE	
1.38	+/-0.030	1.38	/		VERV	
1.750	+/-0.010	1.750	/			
2.125	+/-0.010	2.125	/			
2.250	+/-0.010	2.250	/			
0.875	+/-0.010	.875	/			
0.875	+/-0.010	.875	/			
6.000	+/-0.010	6.000	/			
1.125	+/-0.010	1.125	/			
0.86	+/-0.030	.859	/			
1.38	+/-0.030	1.375	/			
1.38	+/-0.030	1.375	/			
8.04	+/-0.030	8.043	/			
5.29	+/-0.030	5.292	/		H-G	
6.00	+/-0.030	6.000	/			
Ø0.316	+0.006/-0.001	.316	/			
Ø0.391	+0.006/-0.001	.391	/			

Measured by:		Audited by:	DAS 49	Preliminary Approval:	
Date:	17-3-22	Date:	17/03/2020	Date:	

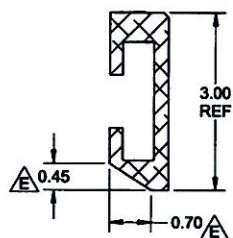
Rev	Date	Change	Revised by	Approved
A	10.06.08	New Issue	KJ	
B	11.06.21	Dwg Rev updated	KJ	



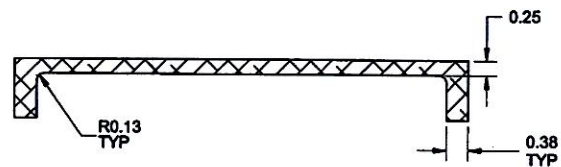




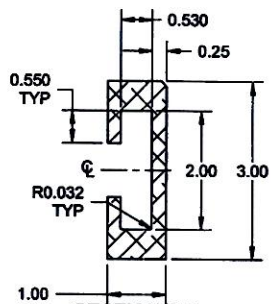
SECTION A-A



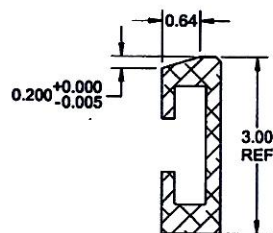
SECTION E-E



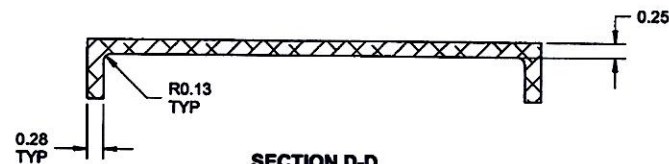
SECTION B-B



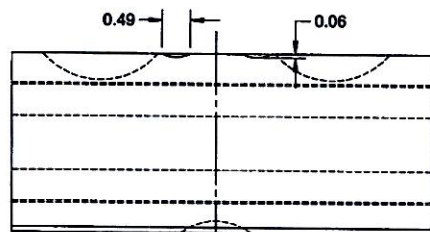
SECTION C-C



SECTION F-F



SECTION D-D



VIEW G-G

RELEASED

2016 NOV 02

APPROVED	DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
	DRAWN	VS		
	CHECKED	RF	DRAWING NO.	REV. E
	MFG. APPR.	JFS	D4037	SHEET 3 OF 3
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	CROSSBEAM	NTS
DATE 16.01.07			COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	